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CENTRAL INTELLIGENCE AGENCY 25X1REPORT

CD NO.

DATE DISTR. 30 June 1950

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**SUPPLEMENT TO
REPORT NO.**

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THIS IS UNEVALUATED INFORMATION

25X1 1. Personnel at the Army Technical Institute (VTU) at Podmokly.

a. Officers

Col. Josef Motycka [redacted]
Lt. Col. Oldrich Liska [redacted]
Major Kramar [redacted]
Major Pernicka [redacted]
Staff Capt. Alois Prokop [redacted]
Staff Capt. Chod [redacted]
Staff Capt. Foremer [redacted]
Staff Capt. Otto Grodzman [redacted]

Capt. Sojka [redacted]
Lt. Jaroslav Micik [redacted]
Warrant Officer Jaroslav Novak [redacted]

Warrant Officer Jar. Cernohlavek

b. Civilians

- works on the production of rockets.
- works on anti-tank weapons.
- works on liquid-driven rockets.

c. Technical School Graduates

construction engineer, works on anti-tank weapons [redacted]

construction engineer, works on firing devices and shells.

construction engineer. works on anti-tank weapons.

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Jaroslav Svadlenak works on turbo-engines.
 Jan Sachi works on liquid-driven rockets.
 Jan Mesrovnal photographer.
 d. Workshop foremen
 Ant. Chaloupka foreman of entire production.
 Josef Kadersky Chaloupka's deputy.
 Hugo Stejskal
 Josef Chlad fire-master (sic, probably
 master armorer).
 Ludvig Lainveber chairman of the works council.

2. Description of VTU Facilities.

- a. The VTU is situated in the Skoda Works building (former Schmidding factory) in Podmokly. Its headquarters are located on the third floor of the administration building. The workshops are under the apprenticeship school of the Skoda plant. There are a testing shop and bunkers on a street in front of the main buildings, and the testing shop for jet engines is near the garden of the Skoda plant. The testing range lies near the main underground passage which leads to the Skoda plant.
- b. The VTU is guarded by military sentries: one guards the small testing shop in front of the bunker, another the testing shop for jet engines, and a third the powder shop. At night, the whole area is floodlighted.
- c. The powder shop is surrounded by a barbed wire fence and contains three small underground storehouses which are designated as P-1, P-2 and P-3. P-1 contains approximately 50 boxes of powder for starts and blasts. P-2 contains simple fuses, electric fuses, armor fuses, light rockets, and primers or detonators. P-3 is used to store live ammunition, Panzerfausts (bazookas), gutti-liquid-driven rockets, heads for rockets, and magnetic mines. In the courtyard are three small underground storehouses designated as R-1, R-2, and R-3. R-1 is used to store all propelling mixtures, colors, paints, and chemicals. R-2 contains starter rockets, smashing bombs, and various kinds of rockets, and is also used as a place to strip shells. HS 293 rockets, barrels containing methyl alcohol, and parts of rocket engines are kept in R-3. There is also an underground bunker made of reinforced concrete in the courtyard. This bunker contains an assembly room where gutti-liquid-driven rockets are assembled, a measuring room where tests are made, a laboratory, and a projection room.

3. Research and Production.

- a. Velocity is measured by means of electric nettings. A piezoelectric cell measures the pressure in atmospheres in the combustion chamber. The barrel is fixed onto a support which itself lies on an iron carriage run on rails and which measures the recoil. Rockets are fired into a sand wall, enabling the depth of penetration to be measured. Later, firing tests are to be made with the weapon held at the shoulder; these tests will be conducted at the army range at Ludvikovice, about 12 kms. northeast of Decin. P-1, P-55, and powder rockets are being tested. Tests on a greater scale, in the presence of commissions, take place on the Milovice range, on the Hluboka range, and at Malacky.
- b. The P-1 recoil-less anti-tank weapon (Attachment II). Most of the research work at VTU is devoted to recoil-less anti-tank weapons, type P-1. Staff Capt. Alois Prokop is construction engineer for this work. The P-1 has a caliber of 80 mm and a barrel which is about 130 cm long. It is fired electrically by means of batteries which are placed in the butt of the weapon and which are connected by wires to the contacts of the combustion chamber. The whole weapon weighs 1.30 - 1.50 kg, and contains 1 kg of TNT. The pressure in the combustion chamber after firing is 340 - 360 Atm. At a distance of 100 - 200 m., the shell pierces a steel plate 45 cm. thick. The shell actually burns through the armor. An official test of the P-1 took place at Milovice at the end of 1948 and the results were satisfactory.

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- c. The P-55 recoil-less anti-tank weapon (Attachment III). Ing. Prechal is the construction engineer in charge of the development of this weapon. The P-55 weighs 6 kg. and is 100 cm. long. The barrel has a diameter of 45 mm. and is about 1 m. long. The buttment (sic) is about 10 cm. long and the blast pipe (jet) is about 20 cm. long. The shell is inserted from the front, weighs 1.30 - 1.50 kg. and contains 800 gm of TNT. The weapon is fired by means of a Schaffler box and, after firing, the pressure in the combustion chamber is 240 - 300 Atm. Practice firing took place at a target filled with asphalt and weights and placed at a distance of 150 m. The shell is capable of piercing 40 - 45 cm of steel plate. The P-55 resembles but is superior to the German Panzerfaust, as it has a greater range, fires without recoil, and is also lighter. During firing, the weapon is held under the arm. It has not yet been distributed to any army unit for practical use.
- d. Powder rocket. This has a diameter of 80 mm, length about 90 cm, weight about 30 kg, range 8 km. The propellant comes in bars having holes in the center and on the sides for the expulsion of gases after leaving the jet. This weapon has been fired from the wings of a YAK and then from a German Messerschmidt, where a mount for five rockets, similar to that used for Katuse rockets, is installed on the plane. The rockets were fired at ground targets only and the effect was similar to that of Katuse rockets.
- e. Powder-driven starter rockets. For fighter planes their diameter is 80 mm and the length is 50 cm. For bombers and transport planes, the diameter is 50 cm and the length is 2.5 m. All these rockets are filled with bar-powder which has to be ignited by means of an electric fuse and a primer. These rockets have been subjected to numerous tests at Podmokly. Both the powder rockets and the starter rockets are being developed by Otto Grossman.
- f. HS-293 rocket (Attachment IV)
- 1) Ing. Libor Holpuch has been working on the development of the HS-293 rocket. This missile is actually a small airplane which hangs beneath a bomber. Behind the head, which contains the explosive charge, there are a radio receiver and an antenna. Between the rudders there is a series of bright rocket-lights above which there is an electromagnetic gyroscope.
 - 2) Beneath the main body of the rocket there is a separate gutti-liquid-driven motor. This motor is in fact a rocket driven by gutti-liquids. Dehydrate of methylene (wood alcohol) is used as one of these liquids. There are eight steel flasks containing compressed air ** at less than 150 Atm. and linked together by a system of tubes which supply air to the combustion chamber. One of these tubes leads to a vessel containing methylene, where it is connected to a rubber balloon. This balloon expands and forces the fuel through side tubes into the combustion chamber. This fuel is ignited in the combustion chamber by means of an electric fuse. The propelling engine may be replaced.
 - 3) Another variation of the rocket motor consists basically of a board to which steel flasks containing compressed air are attached. Other flasks contain nitrogen*** and anilin. When pressurized by the air, the nitrogen and the anilin are released by means of tubes into the combustion chamber, where they meet and ignite by themselves. The burning gases are discharged, under high pressure, through the jet nozzle. The rocket burns for about one minute. Care is taken to prevent contact with grease by the various tubes and flasks, or they would explode immediately. When the pilot sights his target, he releases the bomb and at the same time starts the rocket engine. A radio transmitter in the plane permits the pilot to direct the missile. Radio waves, which are received by the receiver of the bomb, guide the rudders by means of the gyroscope. Upon releasing the lights in the rear of the rocket emit a bright glow, thus enabling the pilot to guide the missile, even in the dark. Twenty-five of these missiles had already been made by 20 May 1949. They were fired from large German bombers at Malacky in Slovakia. The warhead is filled with

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TNT and the shell is intended for use against larger targets such as ships or fortified bunkers.

- g. B.M.W.-003, jet engines. A man named Tuma, who works in Department M (motors), has been working on these engines with Bohous Smarda, a specialist. These engines are designed for twin-engine fighter planes, ME-262 (Messerschmidt) "Schwalbe". Although five of these engines, of which one was a test piece, were completed by the end of March 1949, none had been mounted in any aircraft. Two of these five engines were brought to Prague to be mounted in kites, and one of them had been sold to any foreign country.
- h. New anti-tank weapon. Research was being carried out on a new type of anti-tank weapon. At the time of the report only the barrel, with a combustion chamber and a jet, had been constructed. This test barrel had been mounted on an iron undercarriage resting on narrow rails. Five test shots were fired, but during the last one the jet and the "narazovac" (sic) exploded. Work on this weapon was then stopped as it was decided to finish first the work being done on the P-1 and on the P-55. The INO in Prague, however, urged that this new weapon be completed.
4. Work on 8 cm-type guns had originally been initiated at the Skoda Works and at Zbrojovka. Their guns, however, were very expensive and not too efficient, and, therefore, MNO turned over this production to the VTU, where work on these guns has not yet been started.
5. The electrotechnical department of VTU is in Jeneralka, Prague. Discharging devices for the P-1 and the P-55, as well as transmitters for the HS-293 bomb and for oscillographs, are produced there.

Comment: This is probably a new term for bi-fuel liquid rockets.

Comment: This is probably oxygen.

Comment: This is probably nitric acid or some other nitrogen-oxygen compound.